

U.S. Patent Application Serial No. **10/717,591**
Amendment filed March 21, 2006
Reply to OA dated December 21, 2005

REMARKS

Claims 1 and 4-7 are being prosecuted in this application. Claims 8-16 are withdrawn and confirmation of the election of claims 1-7 is made. Claims 2 and 3 have been cancelled. Claims 1 and 4-7 have been amended in order to more particularly point out, and distinctly claim the subject matter which the applicants regard as their invention. The support for the claim amendments follow:

- Claim 1 is based on p.3, lines 20-23 (electronic parts being mounted); p.4, lines 15-24 (etching stopper film)

The applicants respectfully submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated **December 21, 2005**.

Claims 1-7 are objected to because of informalities. (Office Action, p.2-3).

In claims 1 and 6, the Office Action objected to the use of “an” in connection with a plural noun. Regarding claim 2-7, the Office Action objected to improper antecedent basis in relation to “electronic parts packaging structure.” The claims have been amended in accordance with the Office Action’s suggestion.

It is respectfully requested that the objection be favorably considered.

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Claims 1, 3-5, and 7 have been rejected under 35 USC 103(a) as being obvious over Akagawa ('627 application) in view of Osawa. (Office Action, p.4).

The Office Action concedes that **Akagawa ('627 application)** does not teach a connection pad constructed of a laminated film having an etching stopper film as an uppermost layer, or that the laminating film consists of layers, the layers of film being: copper, gold, silver, or conductive paste/nickel, chromium, or titanium/aluminum.

Osawa is cited for the disclosure of a laminated plate having an etching stopper film as an uppermost layer. (Osawa, [0064]). In **Osawa**, an aluminum film or a nickel film are formed on a copper substrate. Subsequently, however, the copper substrate is removed by selective etching while the **aluminum or nickel film** act as an etching stopper film, not **copper, gold, or silver film, or conductive paste**, as now recited in amended claim 1. Aluminum is easily etched by a laser, and scatters to its surroundings in the process. (Specification, p.2, lines 11-21). The present invention improves upon the prior art which teaches aluminum as an etching stopper film by avoiding the consequent damage to connection pads and neighboring areas from scattering aluminum bits by using an etching stopper film formed of copper, gold, or silver film, or conductive paste, which prevents etching of the aluminum film during formation of via holes by a laser. Unlike the claimed invention, **Osawa** teaches away from using copper as an etching stopper film:

Subsequently, as shown in FIG. 9A, the copper substrate 21 of the metal base 20 is removed by selective etching such that an outer ring 13 is left inside the slits 24. **In this etching, only the copper substrate 21 is removed since the aluminum film 22 acts as an etching stopper.**

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(Osawa, [0071]) (emphasis added).

Regarding claim 4, the Office Action asserts that **Akagawa ('627 application)** discloses a mounted body which is a base substrate(21) having a wire pattern thereon (29), the wiring pattern being connected to a connection pad (40) electrically through via holes (VH) formed in the insulating films. (Akagawa, Fig.1). However, the teachings do not correct the deficiencies of the **Osawa** reference.

Akagawa ('627 application) and **Osawa** fail to render obvious the claimed invention as a whole because the references in combination fail to teach a laminating film having an etching stopper film being copper, gold, or silver film, or conductive paste.

It is respectfully requested that the rejection be favorably considered.

Claim 2, which has been incorporated into amended claim 1, was rejected under 35 USC 103(a) as being obvious over Akagawa ('627 application) in view of Osawa and in view of Akagawa ('308 patent).

Please see the previous discussion regarding **Akagawa ('627 application)** and **Osawa**.

The Office Action concedes that **Akagawa ('627 application)** does not disclose an etching stopper film being selected from a group consisting of: copper film, gold film, silver film, and conductive paste film.

The Office Action asserts that **Akagawa ('308 patent)** discloses an etching stopper film

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selected from a group of films consisting of: a gold film, a silver film, and a conductive paste film.
However, Applicants' review of **Akagawa ('308 patent)** did not reveal such disclosure.

Akagawa ('627 application), Osawa and Akagawa ('308 patent) fail to render obvious the claimed invention as a whole because, in addition to the reasons discussed above, the references in combination fail to teach an etching stopper film selected from a group of films consisting of: a gold film, a silver film, and a conductive paste film.

It is respectfully requested that the rejection be favorably considered.

Claim 6 is rejected under 35 USC 103(a) as being obvious over Akagawa ('627 application) in view of Osawa and in view of Ho.

Please see the previous discussion regarding **Akagawa ('627 application) and Osawa.**

The Office Action concedes that **Akagawa ('627 application)** does not teach a bump of an overlying electronic parts mounted on a wiring pattern by flip-chip mounting.

Ho is cited for the disclosure of a bump of an overlying electronic parts mounted on a wiring pattern by flip-chip mounting. (Ho, Fig.4).

Akagawa ('627 application), Osawa and Akagawa ('308 patent) fail to render obvious the claimed invention as a whole due to the reasons discussed above.

It is respectfully requested that the rejection be favorably considered.

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In view of the aforementioned amendments and accompanying remarks, claims 1 and 4-7, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Office Action is requested to contact the applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: